

| From the INTERNATIONAL | SEARCHING | <b>AUTHORITY</b> |
|------------------------|-----------|------------------|
|------------------------|-----------|------------------|

To: LEDERER & KELLER Attn. Keller, Günter Prinzregentenstr. 16 D-80538 München LEDERER & KEL **GERMANY** EINGANG / RECEIFT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT OR THE DECLARATION

(PCT Rule 44.1)

06.10.2003

Date of mailing (day/month/year)

07/10/2003

Applicant's or agent's file reference

02012302.2

FOR FURTHER ACTION

See paragraphs 1 and 4 below

International application No.

PCT/EP 03/05780

International filing date (day/month/year)

03/06/2003

Applicant

BIOMAY PRODUKTIONS- UND HANDELS-AKTIENGESELLSCHAFT

| 1. | X      | The appl                  | licant is hereby n                    | otified that the International Search Report has been established and is transmitted herewith.  |
|----|--------|---------------------------|---------------------------------------|---|
|    |        | Filing of                 | amendments a                          | nd statement under Article 19:<br>if he so wishes, to amend the claims of the International Application (see Rule 46):  |
|    |        | тне арр                   | iicani is enulieu, i                  | The so wishes, to amend the claims of the international Application (see Hule 46):  |
|    |        | When?                     |                                       | or filing such amendments is normally 2 months from the date of transmittal of the arch Report; however, for more details, see the notes on the accompanying sheet.   |
|    |        | Where?                    | Directly to the                       | International Bureau of WIPO  |
|    |        |                           |                                       | 34, chemin des Colombettes<br>1211 Geneva 20. Switzerland   |
|    |        |                           |                                       | Fascimile No.: (41–22) 740.14.35  |
|    |        | For more                  | e detailed instru                     | actions, see the notes on the accompanying sheet.   |
| 2. |        |                           |                                       | otified that no International Search Report will be established and that the declaration under ect is transmitted herewith.   |
| 3. |        | With reg                  | ard to the prote                      | st against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:   |
|    |        |                           |                                       | with the decision thereon has been transmitted to the International Bureau together with the o forward the texts of both the protest and the decision thereon to the designated Offices.  |
|    | •      | no d                      | decision has bee                      | n made yet on the protest; the applicant will be notified as soon as a decision is made.  |
| 4. | Furth  | ner action                | n(s): The appli                       | cant is reminded of the following:  |
|    | If the | ne applica<br>prity claim | nt wishes to avoi<br>, must reach the | ne priority date, the international application will be published by the International Bureau. dor postpone publication, a notice of withdrawal of the international application, or of the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the eparations for international publication. |
|    | Withi  | n 19 mon                  | ths from the prio                     | rity date, a demand for international preliminary examination must be filed if the applicant  |

wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later). Within 20 months from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the

| Name | and mailing | address | of the | International | Searching | Authority |
|------|-------------|---------|--------|---------------|-----------|-----------|
|------|-------------|---------|--------|---------------|-----------|-----------|

European Patent Office, P.B. 5818 Patentlaan 2

priority date or could not be elected because they are not bound by Chapter II.

NL-2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl. Fax: (+31-70) 340-3016

Authorized officer

Barbara Klaver



These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

#### **INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19**

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international politication. Furthermore, it should be emphasized that provisional protection is available in some States only.

#### What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

#### When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

#### Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been its filed, see below.

#### How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

#### What documents must/may accompany the amendments?

#### Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

Notes to Form PCT/ISA/220 (first sheet) (January 1994)

#### NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled:
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

# The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

- [Where originally there were 48 claims and after amendment of some claims there are 51]:
  "Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
- [Where originally there were 15 claims and after amendment of all claims there are 11]: "Claims 1 to 15 replaced by amended claims 1 to 11."
- [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
   "Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or "Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
- 4. [Where various kinds of amendments are made]: "Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

#### "Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

#### It must be in the language in which the international appplication is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

#### Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

#### Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

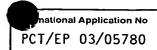
# **PCT**

### INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| Applicant's or agent's file reference 02012302.2   |   |                                   |                         | ational Search Report applicable, item 5 below. |
|--|---|-----------------------------------|-------------------------|---|
| International application No.  | International filing date (day  | /month/year)                      | (Earliest) Priority D   | Pate (day/month/year)                           |
| PCT/EP 03/05780  | 03/06/200   | 3                                 | 04/                     | /06/2002  |
| Applicant  |   |                                   |                         |   |
| BIOMAY PRODUKTIONS- UND HA   | ANDELS-AKTIENGESEL  | LSCHAFT                           |                         |   |
| This International Search Report has been according to Article 18. A copy is being tra   |   |                                   | rity and is transmitte  | ed to the applicant                             |
| This International Search Report consists  It is also accompanied by   | of a total of4<br>a copy of each prior art docum  | sheets.<br>nent cited in this re  | eport.                  |   |
| Basis of the report  |   |                                   |                         |   |
| With regard to the language, the language in which it was filed, unloading to the language in which it was filed, unloading to the language. | international search was carrie<br>ess otherwise indicated under                                | ed out on the basis<br>this item. | of the international    | application in the                              |
| the international search w<br>Authority (Rule 23.1(b)).  | as carried out on the basis of  | a translation of the              | international applic    | ation furnished to this                         |
| b. With regard to any <b>nucleotide an</b> was carried out on the basis of the   |   | sclosed in the inte               | rnational application   | n, the international search                     |
| 1 550  | nal application in written form.  |                                   |                         |   |
| filed together with the inter  | rnational application in compu  | ter readable form.                |                         |   |
| furnished subsequently to  | this Authority in written form.   |                                   |                         |   |
| furnished subsequently to  | this Authority in computer rea  | dble form.                        |                         |   |
|  | sequently furnished written se<br>s filed has been furnished.                                   | quence listing doe                | es not go beyond the    | e disclosure in the                             |
| the statement that the info furnished  | rmation recorded in computer  | readable form is i                | dentical to the writte  | n sequence listing has been                     |
| 2. Certain claims were four  | nd unsearchable (See Box I).  |                                   |                         |   |
| 3. Unity of invention is lack  | king (see Box II).  |                                   |                         |   |
| 4. With regard to the title,   |   |                                   |                         |   |
| X the text is approved as sul  | omitted by the applicant.   |                                   | -                       |   |
| the text has been establish  | ned by this Authority to read a   | s follows:                        |                         |   |
|  | omitted by the applicant.<br>ned, according to Rule 38.2(b)<br>date of malling of this internal |                                   |                         |   |
| 6. The figure of the <b>drawings</b> to be publi   | _   |                                   | ., Josephin John Hollie | to and realizably)                              |
| as suggested by the applic   | <del>_</del>  | C 140.                            | ΓXT                     | None of the figures.                            |
| because the applicant faile  |   |                                   | <u> </u>                | Tione of the lightes.                           |
|  | characterizes the invention.  |                                   |                         |   |
| L  |   |                                   |                         |   |

## INTERNATIONAL SEARCH REPORT



A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C12N15/29 C07K14/415

C07K16/16

A61K39/36

According to International Patent Classification (IPC) or to both national classification and IPC

#### B. FIELDS SEARCHED

 $\label{eq:minimum} \begin{array}{ll} \text{Minimum documentation searched (classification system followed by classification symbols)} \\ IPC 7 C12N C07K A61K \end{array}$ 

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, BIOSIS, MEDLINE, SEQUENCE SEARCH, EMBL

| Category °   |  |   | <del></del>  |
|--|--|---|--|
|  | Citation of document, with indication, where appropriate, of   | the relevant passages .   | Relevant to claim No.  |
| X  | WO 96 13589 A (IMMULOGIC PHARM<br>9 May 1996 (1996-05-09)<br>the whole document,<br>in particular SEQ ID NO: 4   | 1A CORP)  | 1,3,4,<br>6-17   |
| X  | WO 94 01560 A (IMMULOGIC PHARM<br>JULIAN F (US); KUO MEI CHANG (<br>20 January 1994 (1994-01-20)<br>the whole document,<br>in particular figure 17   | MA CORP ;BOND<br>(US); POL)   | 1,4-11,<br>13-17   |
|  | ·  | -/  |  |
|  |  | -   |  |
|  |  |   |  |
|  |  |   |  |
| ĺ  |  |   |  |
|  |  |   |  |
|  |  |   |  |
|  | ·  |   |  |
| X Furth  | er documents are listed in the continuation of box C.  | χ Patent family members are lis   | led in annex.  |
| <u> </u>   | er documents are listed in the continuation of box C.  |   |  |
| Special cat  | egories of cited documents :  nt defining the general state of the art which is not  | *T* later document published after the<br>or priority date and not in conflict v<br>cited to understand the principle of  | international filing date with the application but   |
| 'Special cat 'A' docume conside 'E' earlier d  | egories of cited documents :  nt defining the general state of the art which is not ered to be of particular relevance ocument but published on or after the international   | *T* later document published after the<br>or priority date and not in conflict v<br>cited to understand the principle of<br>invention   | international filing date<br>with the application but<br>theory underlying the   |
| 'A' docume consider earlier defiling de L' docume  | regories of cited documents :  Int defining the general state of the art which is not erred to be of particular relevance ocument but published on or after the international ate  Int which may throw doubts on priority claim(s) or  | *T* later document published after the<br>or priority date and not in conflict v<br>cited to understand the principle of  | international filing date with the application but retheory underlying the the claimed invention the considered to   |
| P Special cate A* docume conside E* earlier d filing de L* documen which i citation  | regories of cited documents:  Int defining the general state of the art which is not sered to be of particular relevance ocument but published on or after the international state.  Int which may throw doubts on priority claim(s) or so cited to establish the publication date of another or other special reason (as specified)   | <ul> <li>'T' later document published after the or priority date and not in conflict vided to understand the principle of invention</li> <li>'X' document of particular relevance; the cannot be considered novel or can involve an inventive step when the</li> <li>'Y' document of particular relevance; the cannot be considered novel or can involve an inventive step when the</li> </ul>  | international filing date with the application but r theory underlying the ne claimed invention mot be considered to document is taken alone ne claimed invention  |
| Special cate 'A' docume conside 'E' earlier d filing de 'L' documen which i citation   | regories of cited documents:  Int defining the general state of the art which is not ered to be of particular relevance ocument but published on or after the international ate of the properties of the publication date of another or other special reason (as specified)  Int referring to an oral disclosure, use, exhibition or   | "T* later document published after the or priority date and not in conflict v cited to understand the principle or invention  "X" document of particular relevance; the cannot be considered novel or can involve an inventive step when the  "Y" document of particular relevance; the cannot be considered to involve an document is combined with one or ments, such combination being ob  | international filing date with the application but r theory underlying the me claimed invention mot be considered to document is taken alone me claimed invention invention inventive step when the more other such docu-                  |
| P Special cat  A' docume conside E' earlier d filling de L' docume which i citation O' docume other n  | regories of cited documents:  Int defining the general state of the art which is not ered to be of particular relevance ocument but published on or after the international ate of the properties of the publication date of another or other special reason (as specified)  Int referring to an oral disclosure, use, exhibition or   | <ul> <li>"T" later document published after the or priority date and not in conflict votied to understand the principle of invention</li> <li>"X" document of particular relevance; the cannot be considered novel or can involve an inventive step when the</li> <li>"Y" document of particular relevance; the cannot be considered to involve an document is combined with one or ments, such combination being ob in the art.</li> </ul>   | international filing date with the application but r theory underlying the me claimed invention most be considered to document is taken alone me claimed invention inventive step when the more other such docu- vious to a person skilled |
| P Special cate consider a conside | regories of cited documents:  Int defining the general state of the art which is not ered to be of particular relevance ocument but published on or after the international ate into which may throw doubts on priority claim(s) or scited to establish the publication date of another or other special reason (as specified) interesting to an oral disclosure, use, exhibition or leans into published prior to the international filing date but   | "T* later document published after the or priority date and not in conflict v cited to understand the principle or invention  "X" document of particular relevance; the cannot be considered novel or can involve an inventive step when the  "Y" document of particular relevance; the cannot be considered to involve an document is combined with one or ments, such combination being ob  | international filing date with the application but a theory underlying the me claimed invention and be considered to document is taken alone as claimed invention a inventive step when the more other such docuvious to a person skilled  |
| P Special cate consider a conside | regories of cited documents:  Int defining the general state of the art which is not ered to be of particular relevance ocument but published on or after the international ate of the international state of the international state of the international state of the international reason (as specified) or other special reason (as specified) or referring to an oral disclosure, use, exhibition or neans of the international filing date but an the priority date claimed  | <ul> <li>'T' tater document published after the or priority date and not in conflict vided to understand the principle of invention</li> <li>'X' document of particular relevance; the cannot be considered novel or can involve an inventive step when the</li> <li>'Y' document of particular relevance; the cannot be considered to involve an document is combined with one or ments, such combination being ob in the art.</li> <li>'&amp;' document member of the same pate</li> </ul>                    | international filing date with the application but a theory underlying the me claimed invention and the considered to document is taken alone as claimed invention a inventive step when the more other such docuvious to a person skilled |
| P Special cate consider a conside | regories of cited documents:  Int defining the general state of the art which is not ered to be of particular relevance ocument but published on or after the international ate  Int which may throw doubts on priority claim(s) or so cited to establish the publication date of another or other special reason (as specified)  Int referring to an oral disclosure, use, exhibition or neans  Int published prior to the international filling date but an the priority date claimed  Ictual completion of the international search | *T* tater document published after the or priority date and not in conflict vided to understand the principle or invention  *X* document of particular relevance: the cannot be considered novel or can involve an inventive step when the cannot be considered to involve at document of particular relevance; the cannot be considered to involve at document is combined with one or ments, such combination being ob in the art.  *&* document member of the same pate Date of mailing of the international | international filing date with the application but a theory underlying the me claimed invention and the considered to document is taken alone as claimed invention a inventive step when the more other such docuvious to a person skilled |
| P Special cate consider a conside | regories of cited documents:  Int defining the general state of the art which is not sered to be of particular relevance ocument but published on or after the international sate of the properties of the properties of another or other special reason (as specified)  Int referring to an oral disclosure, use, exhibition or seans  Int published prior to the international filling date but an the priority date claimed  International search   | *T* tater document published after the or priority date and not in conflict vided to understand the principle or invention  *X* document of particular relevance; the cannot be considered novel or can involve an inventive step when the cannot be considered to involve an document of particular relevance; the cannot be considered to involve an document is combined with one or ments, such combination being ob in the art.  *&* document member of the same pate.                                     | international filing date with the application but a theory underlying the me claimed invention and be considered to document is taken alone as claimed invention a inventive step when the more other such docuvious to a person skilled  |

1

## INTERNATIONAL SEARCH REPORT

national Application No PCT/EP 03/05780

|            | ation) DOCUMENTS CONSIDERED TO BE RELEVANT  Citation of document, with indication, where appropriate, of the relevant passages  | Polovant to slaim No. |
|------------|---|-----------------------|
| Category ° | Chanch of Occument, with indication, where appropriate, of the resevant passages  | Relevant to claim No. |
| Y          | FERREIRA FATIMA ET AL: "Isolation and characterization of cDNA clones coding for mugwort (Artemisia vulgaris) pollen allergens."  INTERNATIONAL ARCHIVES OF ALLERGY AND IMMUNOLOGY, vol. 124, no. 1-3, January 2001 (2001-01), pages 77-79, XP008006228 ISSN: 1018-2438 the whole document  | 1-17                  |
| <b>Y</b> . | HIRSCHWEHR R ET AL: "ALLERGENS, IGE, MEDIATORS, INFLAMMATORY MECHANISMS. IDENTIFICATION OF COMMON ALLERGENIC STRUCTURES IN MUGWORT AND RAGWEED POLLEN" JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY, MOSBY — YEARLY BOOK, INC, US, vol. 101, no. 2, PART 1, February 1998 (1998-02), pages 196-206, XP000857295 ISSN: 0091-6749 cited in the application the whole document | 1-17                  |
| A          | WO 99 49045 A (BREITENBACH MICHAEL; ENGEL EDWIN (AT); RICHTER KLAUS (AT); EBNER C) 30 September 1999 (1999-09-30) cited in the application the whole document   | 1-17                  |
|            |   |                       |
|            | ·   |                       |
| ٠.         |   |                       |
|            |   |                       |
|            |   |                       |
|            |   |                       |
|            |   |                       |
|            |   |                       |
|            |   |                       |
|            |   |                       |
|            |   |                       |
|            |   |                       |

1

## INTERNATIONAL SEARCH REPORT

formation on patent family members .

hational Application No PCT/EP 03/05780

| Patent document cited in search report |   | Publication<br>date |    | Patent family<br>member(s) | Publication date |
|--|---|---------------------|----|----------------------------|------------------|
| W0 9613589                             | Α | 09-05-1996          | AU | 4146796 A                  | 23-05-1996       |
|  |   | -                   | WO | 9613589 A1                 | 09-05-1996       |
| WO 9401560                             | A | 20-01-1994          | AU | 3438493 A                  | 31-01-1994       |
|  |   |                     | ΑU | 7056996 A                  | 13-02-1997       |
|  |   |                     | ΕP | 0595855 A1                 | 11-05-1994       |
|  |   |                     | JP | 6508994 T                  | 13-10-1994       |
|  |   |                     | WO | 9401560 A1                 | 20-01-1994       |
|  |   |                     | ΑU | 2300492 A                  | 11-02-1993       |
|  |   |                     | ΑU | 5586096 A                  | 29-08-1996       |
|  |   |                     | CA | 2112913 A1                 | 21-01-1993       |
|  |   |                     | WO | 9301213 A1                 | 21-01-1993       |
|  |   |                     | US | 6090386 A                  | 18-07-2000       |
|  |   |                     | CA | 2120954 A1                 | 20-01-1994       |
|  |   |                     | EP | 0659214 A1                 | 28-06-1995       |
|  |   |                     | JP | 8502163 T                  | 12-03-1996       |
|  |   |                     | NZ | 246806 A                   | 25-09-1996       |
| WO 9949045                             | A | 30-09-1999          | AT | 407048 B                   | 27-11-2000       |
|  |   |                     | AT | 53998 A                    | 15-04-2000       |
|  |   |                     | WO | 9949045 A2                 | 30-09-1999       |
|  |   |                     | ΑU | 3017699 A                  | 18-10-1999       |
|  |   |                     | CA | 2324165 A1                 | 30-09-1999       |
|  |   |                     | EP | 1068323 A2                 | 17-01-2001       |
|  |   |                     | JP | 2002508943 T               | 26-03-2002       |
|  |   |                     | NO | 20004727 A                 | 03-11-2000       |